

968.672



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DRAWINGS ATTACHED

968.672

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COMPLETE SPECIFICATION

Improvements in and relating to Screws with False Heads for Disguising their Ends

We, BAKER & FINNEMORE LIMITED, a British Company of 199 Newhall Street, Birmingham, 3, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

In many cases where screws are used to fasten structures together the head of the screw is necessarily left exposed at the surface of one of the structures in a conspicuous situation and presents an unsightly appearance unless the surface of the structure is concealed, or the head of the screw is disguised in some way. There are circumstances in which it is impossible or undesirable to cover the surface of the structure and it becomes necessary to fit to the head of the screw a small, decorative cover which does not mar the appearance of the surface. A mirror fastened to a wall or panel by screws which pass through the reflecting surface affords a good example of the kind of situation in which it is desirable to mark the screw with a false head of neat appearance.

It is known to provide for a screw a false head in the form of a solid metal button having a mushroom-like body with a flat surface which bears against the slotted surface of the screw head. From the centre of the flat surface of the button projects an externally threaded stem or plug which can be screwed into a threaded hole in the head of the screw. Such a device embodies a relatively large amount of metal and also involves a careful and expensive machining operation. Furthermore, where the outer surface of the button is completely smooth and polished or plated it is difficult to screw the button securely into its socket and there is always a risk that it may work loose, fall out, and become lost.

It is an aim of the present invention to provide a screw having a false head of new and improved construction which may be readily and cheaply made from sheet metal and which

can be fitted securely to the screw in a particularly easy and convenient manner.

The present invention consists in the combination of a screw and a false head mounted on the screw, the false head comprising a hollow, open cap of sheet metal and a sheet metal retainer held in the mouth of the cap, said retainer having a peripheral web portion anchored to the cap and fingers extending inwards from the web towards a central opening and projecting slightly out of the plane of their roots towards the body of the cap, and the screw comprising a cylindrical boss projecting into the cap through the central opening defined by the tips of the fingers which resiliently engage the boss.

The central opening in the retainer is preferably of circular form and the diameter of the boss is such that there is a small interference between the tips of the fingers and the boss. Consequently, when the cap is pushed onto the boss the fingers yield and their tips spread apart to admit the boss. The fingers are thus inclined to the cylindrical periphery of the boss and allow the cap to be moved along the boss in one direction towards the surface from which the boss projects, but not in the reverse direction when the tips of the fingers are drawn together to exert a powerful radial pressure against the boss and prevent movement of the cap.

The boss may constitute the entire head of the screw, in which case the false head may have the anchoring function of the head of a normal screw as well as a purely decorative function.

The invention also consists in a method of disguising the head of a screw which comprises fitting onto a cylindrical boss at the exposed end of an embedded screw a false head having a dished sheet metal cap and a fingered retaining ring of sheet metal held within the mouth of the cap, which ring will allow movement of the head in one direction along the boss but not in the reverse direction

and pushing said false head along the boss into abutting relation with the surface from which the boss projects.

The invention will now be described by way of example with reference to the accompanying drawings in which,

Figure 1 is a view partly in section of a screw and false head according to the invention.

Figure 2 is a view similar to Figure 1 but showing a modified screw.

Figure 3 is an underside plan view of the false head.

In all three figures the false head indicated at 4 is the same. In Figure 1, 5 indicates the screw and in Figure 2, 6 indicates the modified screw. The false head 4 comprises a dome-like sheet metal cap 7 and a retaining ring 8 which is located in the mouth of the cap and clamped in position by the overturned edge 9 of the cap. The retaining ring 8 consists of a sheet metal annulus 10, which is gripped by the overturned edge of the cap, and a number of radial fingers 11 which project inwardly towards a central opening 16 defined by the tips 12 of the fingers and of generally circular configuration. The fingers 11 are bent out of a plane perpendicular to the axis of the cap towards the dome and a substantial clearance is left between the tips 12 of the fingers and the crown of the dome in order to accommodate within the cap the free end of the boss at the head of the screw 5 or 6.

In Figure 1 the boss of the screw 5 is a cylindrical continuation 13 of the terminal portion of the shank and is of similar diameter. The free end of the boss 13 is provided with a screw-driver slot 14 or any other suitable known form of driving recess. In use the screw is driven in to a wall or other surface to which an article such as a mirror 15 is to be secured until only the cylindrical continuation 13 projects above the outer surface of the article. The screw does not hold the article but merely locates it laterally. The anchoring function is performed by the false head which is pushed onto the projecting boss 13 until it bears on the article. Such an arrangement is quite safe since the retaining ring in the false head is able to resist quite massive retractive axial thrusts. The screw must be driven in sufficiently to allow the boss 13 projecting through the opening 16 to be accommodated within the false head.

Instead of the boss 13 being a cylindrical continuation of the same diameter as the adjacent shank it may be of smaller diameter. Driving slots could then be provided in the annular shoulder so formed to be engaged by a tubular screw driver. The boss, particularly in small sizes, would not be weakened by the screw-driver slot and if desired a smaller size false head could be fitted.

In Figure 2 the driving end of the screw

shank 6 terminates in a conical head 17 adapted to fit in the normal way into a countersunk hole. From the centre of this conical head projects a smooth, cylindrical boss or stud 18 which is divided at its free end by the driving slot 19 or an equivalent driving recess. With this embodiment of the invention the countersunk hole is formed in the surface of a mirror 20, for example, and the screw itself anchors the mirror to a wall or other structure. The cap is then fitted to the end of the boss and pushed into engagement with the surface of the mirror.

Instead of the screw-driver slot being in the end of the boss it could be provided in the countersunk head to be used with a tubular screw-driver as previously described.

In the type of false head described and illustrated the tips 12 of the fingers lie in the same plane and it is virtually impossible to remove the head from the cylindrical boss without destroying or damaging it. This difficulty may be overcome by forming the tips of the fingers with margins which extend helically around the periphery of the boss. The false head may then be unscrewed from the boss but there is little risk that the head will work loose of its own accord owing to the resilient grip of the fingers.

WHAT WE CLAIM IS:—

1. The combination of a screw and a false head mounted on the screw, the false head comprising a hollow, open cap of sheet metal and a sheet metal retainer held in the mouth of the cap, said retainer having a peripheral web portion anchored to the cap and fingers extending inwards from the web towards a central opening and projecting slightly out of the plane of their roots towards the body of the cap and the screw comprising a cylindrical boss projecting into the cap through the central opening defined by the tips of the fingers which resiliently engage the boss.

2. The combination of a screw and a false head according to claim 1 wherein the boss is not larger in diameter than the adjacent shank of the screw.

3. The combination of a screw and a false head according to claim 1 wherein the boss projects from a radial enlargement of the shank of the screw, the enlargement being adapted to perform the anchoring function of a screw head.

4. The combination of a screw and a false head according to claim 3 wherein the enlargement has the basic shape of a countersunk head screw.

5. The combination of a screw and a false head according to any preceding claim wherein a driving slot or recess is provided at the free end of the boss.

6. The method of disguising the head of a screw which comprises fitting onto a cylindrical boss at the exposed end of an embedded screw a false head having a dished sheet

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5 metal cap and a fingered retaining ring of sheet metal held within the mouth of the cap, which ring will allow movement of the head in one direction along the boss but not in the reverse direction and pushing said false head along the boss into abutting relation with the surface from which the boss projects.
7. The combination of a screw and a false head substantially as described herein with

reference to and as illustrated by Figures 1 10
and 3 or Figures 2 and 3 of the accompanying drawings.

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COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of
the Original on a reduced scale*

FIG. 1.

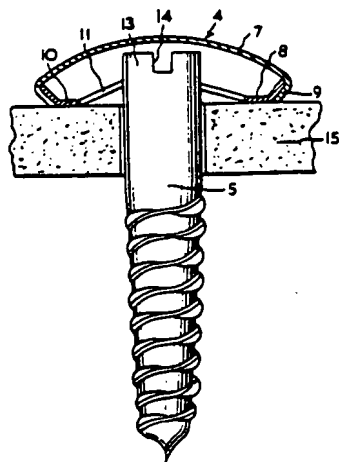


FIG. 2.

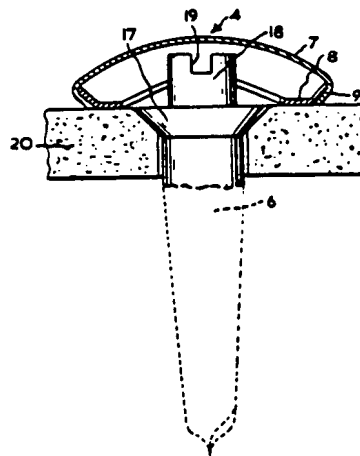


FIG. 3.

